



**MISSOURI DEPARTMENT OF TRANSPORTATION  
SPECIFICATIONS FOR HYDROSTATICALLY DRIVEN  
FRONT WHEEL DRIVE SELF-PROPELLED CHIPSPREADER  
WITH VARIABLE WIDTH SPREAD HOPPER**

**GENERAL** – It is the intent of these specifications to describe a hydrostatically driven, self-propelled Chipspreader in sufficient detail to secure bids on comparable equipment. All parts not specifically mentioned, which are necessary to provide a complete Chipspreader, shall be included in the bid and shall conform in strength and quality of material and workmanship to what is generally provided to the industry. The unit shall be a current model in standard production by the manufacturer.

All warranties will be taken into consideration before awards are made.

**ENGINE** – Cummins 6CTA8.3 6 cylinder, turbocharged, diesel engine. Manufacturers maximum rating 230 HP. To include electric start, alternator, voltage regulator and 12 volt batteries. Engine to have dry type air cleaner, disposable element type oil filter, heavy duty cooling system, cable throttle actuator. Control/instrument panel to have lockable cover to prevent accidental starting and pilferage.

**HYDROSTATIC DRIVE** - Mechanical front wheel drive steer axle, full oscillating, 77" wheel track, 19.6:1 gear ratio, 25,000 lb. rated, single speed, limited slip differential. Driven by direct engine bell housing mounted 125 cc hydrostatic pump and 160 cc hydrostatic motor. Rear axle is 25,000 lb. rated with 97" wheel track. Infinitely variable speed from 0 to 19.5 MPH.

**BRAKES** - Mechanical front axle has hydraulic internal wet disc brakes controlled by forward/reverse joystick. Rear axle has hydraulic actuated drum brakes, 16 1/2 " x 7". Also included spring applied, hydraulic release fail-safe parking brake in the driveline, automatically applies if hydraulic power is lost.

**STEERING** – Full hydrostatic power steering from 1.65 cc fixed displacement gear pump, with dedicated flow independent of engine speed.

**TIRES and WHEELS** – (4) 385/75r 22.5 tires on disc wheels.

The complete power train, diesel engine, hydrostatic pump and motor, front and rear axles, shall be mounted to the lower removable main frame. Upper mainframe assembly includes both conveyors, right and left access ladders and walkways, 95-gallon built-in hydraulic oil reservoir, 80-gallon diesel fuel tank for engine, rear 4 cubic yard hopper and truck hitch. Includes paver style rear folding hopper. Complete mainframe is 3/16" steel construction.

**Conveyors:** To have heavy-duty 24" conveyor belts which are independently activated by electric switches. To be powered by a load sensing 74 cc variable displacement pressure compensated hydraulic pump, high torque 14.8 C.I.R. hydraulic motors, with direct drive to head pulley. Electric switches for each conveyor control to have easy access mechanical override. Hooded, adjustable aggregate deflector to be located at head of each conveyor. Troughing idlers to be quick removable type and tail pulley to be adjustable for insuring proper belt alignment.

**AUTOMATIC CONVEYOR CONTROL** – Automatically starts and stops the conveyor belts to control the aggregate level in the spread hopper. Shall include override control enabling the driver/operator to start or stop the conveyors, and each conveyor to have valve control providing flexibility in belt speed.



VARIABLE WIDTH SPREAD HOPPER – 10' TO 20' variable spread width from minimum 5'. Infinitely variable width two section hopper system. Including driven dual auger and spread rolls. Independent conveyor feed to each hopper. Hydraulic system with all pumps, hoses, valves and control system necessary for operation. Operating controls at both driver and right front operator stations. Expanded metal in top of hopper with replaceable grates under conveyor hoods. Installed on Hydrostatic Drive Chipspreader at time of new order production. Individual controls to allow aggregate spreading in 1' increments on each side of variable width hoppers. 10'/20' hopper has (4) 1' gates each side.

FRONT HOPPER REJECT SCREEN – A full width rock type screen with 1 ½" openings shall be placed over the top of the spread hopper to retain all oversized materials and foreign objects.

TRUCK HITCH - The unit shall be equipped with a positive, self-locking "railroad" type adjustable truck hitch, which can be electrically released from the drivers or operators position. Hitch height to be electrically controlled from drivers seat. The truck hitch shall be the type that will permit hooking and unhooking of aggregate trucks without stopping the Chipspreader and be capable of maintaining positive engagement over irregular terrain.

APPLICATION RATE COMPUTER – In the application mode, the Application Rate Computer monitors the actual speed of the Etnyre Chipspreader, and varies the gate opening in order to maintain the set application ratio, in lbs./yd<sup>2</sup>, of the selected aggregate, regardless of the speed of the Chipspreader. The computer can store five different aggregate/application rate combinations in its memory. The preset aggregate can be selected together with its application rate at any time. In addition, the application rate can be varied as desired while operation, or a different preset combination may be selected at any time.

The computer can also be set to control the chipspreader's forward speed for consistent speed when following the distributor. The computer speed sensor replaces the need for radar ground speed system. Computer also monitors fuel level, engine oil pressure, hydraulic oil temperature, engine coolant temperature, hours on engine and miles chipped.

OPERATOR STATION – All controls located to the front for easy access to the mechanical spring suspension seat from either right or left side. POWER SEAT PEDESTAL: Electric powered seat and control panel movement for dual control operation.

MISCELLANEOUS –

LIGHT PACKAGE: Unit to have headlights, stop and tail lights and turn signals with flasher switch.

FRONT FENDERS: Each side.

HORN: An electric horn shall be furnished.

BACKUP ALARM: An electric backup warning alarm to be furnished.

PAINT: To be manufacturer's standard color.

Unit to have one full-length walkway with skid resistant surface adjacent to one side of conveyor system. A steel lockable toolbox shall be mounted under the main deck.

WARRANTY – One year on material and workmanship. Components manufactured by others shall carry such warranty as is provided by that particular manufacturer.

Manufacturer's descriptive literature/specifications shall be included with the bid and any deviations from these specifications are to be listed.

Successful bidder to furnish parts book(s) and complete operating instructions.

The Missouri Highways and Transportation Commission reserves the right to waive technicalities and to reject any or all bids and no bid is final until formally accepted by the Commission.